

**Berberis reticulata**, spec. nov.

Frutex ad 2-metralis; ramuli annotini et biennes purpurascentes, glabri, angulati, vetustiores cinereo-brunnescentes; internodia 1.5–4 cm. longa; spinae pleraeque simplices, parvae, ad 9 mm. longae. Folia ad 6 fasciculata, spathulato-obovata, tenuia, apice obtusa vel rotundata, mucronulata, basim versus in petiolum 2–12 mm. longum decurrentia, margine anguste aequaliter spinoso-dentata, spinis 1 mm. longis, supra viridia, subtus cinerea, utrinque distinete reticulata, petiolis inclusis 2.0 : 0.9–4.0 : 1.6–5.6 : 2.1 cm. magna. Inflorescentiae breviter corymbo-sracemosae, ad 8-florae, 1.4–2.0 cm. longae, glabrae; pedicelli 4–7 mm. longi, basi bracteis acuminatis 1 mm. longis suffulti; flores flavi, extus rubescentes, satis magni (circiter 11 mm. diam.), sepala interna late obovata, 7 mm. longa, petalis obovatis apice emarginatis basi nectariis ovalibus instructis majora; stamina normalia; ovaria ovulis 2 sessilibus instructa. Fructus ovales, rubri, leviter pruinosi, ad 11 : 8 mm. magni, stigmatibus sessilibus coronati.

NORTHERN CHINA: without precise locality, Wm. Purdom, no. 644 (seeds only); plants raised from this seed cultivated in the Arnold Arboretum under no. 20081. Specimens examined: *A. Rehder* May 11 and 21, 1927 (type), May 15, 1918, May 16, 1919, May 15, 1922, Sept. 14, 1922, *L. V. Schmitt*, Sept. 23, 1926.

This species seems to be related to *Berberis Silva-Taroucana* Schneider and *B. Mouillacana* Schneider of the section *Tschonoskyanae*, and *Berberis Boschanii* Schneider and *B. Lecomtei* Schneider of the section *Sinenses*. The leaf-texture and the rather big fruits resemble those of species of the former, the short inflorescence, the small spines and the red-tinged flowers suggest the latter section, in which it could best be placed. It differs from all species mentioned in the corymbose inflorescence, the larger flowers and the strongly reticulate leaf.

**Berberis Cavaleriei** var. *pruinosa*, var. nov.

*Berberis* sp. *Rehder* in Jour. Arnold Arb. VIII. 108 (1927).

A typo recedit foliis subtus albescensibus, pruinosis.—Ramuli flavi, angulati; spinae trifidae, flavescentes, mediae ad 2.5 cm. longae. Folia tenuiter coriacea, oblonga, 3 : 1 ad 5 : 1.4 cm. magna, apice acuta, basi cuneata in petiolum ad 3 mm. longum attenuata, margine distanter spinuloso-serrata (dentibus 0.5–1 mm. longis 1–3 pro 1 cm.), superne viridia, subnitentia, supra albopruinosa, utrinque laxe nervata. Inflorescentiae fasciculatae, 6–12-florae. Fructus pruinosi, stylo brevi excluso 7 mm. longi et 4 mm. crassi, semina 2; pedicelli 14–18 mm. longi.

SOUTHERN ANHWEI: Chang gon shan, Wu yuan, thickets in ravine, *R. C. Ching*, no. 3248 (type), Aug. 17, 1925 (shrub 1 m. tall, leaves evergreen, dull shining green, fruit greenish, pendulous).

This variety seems to be the extreme eastern form of the widely distributed species.

*Berberis densifolia*, spec. nov.

Frutex 0.3–1.2 m. altus; ramuli juniores geniculati, sulcato-angulati, flavi, vetustiores flavescenti-cinerascentes; internodia 1–2(–4) cm. longa; spinae tripartitae, flavae, mediae ad 1.3 cm. longae. Folia ad 6 fasciculata, crasse coriacea, cuneata vel oblanceolata, apice sensim acuta, mucronata, basi sensim in petiolum 1–2 mm. longum attenuata, margine saepe revoluta, versus apicem dentibus 1–3 munita, minora 1 cm. longa, 5–6 mm. lata, majora 3 cm. longa, 7–10 mm. lata, supra viridia, subtus albo-pruinosa vel in sicco ferruginea, indistincte laxe reticulata. Flores nondum vidi. Fructus ad 3 fasciculati, ovales, circiter 7–9 : 6 mm. magni, stylo brevi coronati, atrocoerulei; pedicelli ad 7 mm. longi; semina 3.

FORMOSA: Prov. Nanto: Mount Kiraishui, alt. 3500–3600 m., E. H. Wilson, no. 10074 (type), Mar. 6, 1918 (bush 0.3–1.2 m., fruit blue-black).

The nearest relatives among the Chinese species appear to be *Berberis triacanthophora* Fedde, which has, however, reddish-brown, round twigs and much longer flower-stalks and *B. replicata* W. W. Smith, which differs in having round twigs, longer flower-stalks and smaller fruits.

The other Formosan species can all be easily distinguished: *Berberis aristato-serrulata* Hayata by the finely serrulated leaf-margin, *Berberis Kawakamii* Hayata by the larger, more strongly reticulate and non-pruinose leaves and the 10–15-flowered inflorescences with longer pedicels, *Berberis brevisepala* Hayata by the uniovulate ovaries, the red twigs and the larger and wider leaves, *Berberis mingensis* Hayata by the very large, strongly reticulate leaves.

*Berberis densifolia* Wilson no. 10074 has been distributed as *Berberis Kawakamii* Hayata.

*Berberis Cavaleriei* Léveillé in Fedde Rep. Spec. Nov. IX. 454 (1911).—Schneider in Oesterr. Bot. Zeitschr. LXVII. 140 (1918).

*Berberis Griffithiana* Léveillé Fl. Kouy-Tcheou. 48 (1914).—Non Schneider.

The type-specimens were collected in Kweichow by J. Cavalerie (no. 3209), it has now been found also in Chekiang (R. C. Ching, Plants of Chekiang, no. 2336), Hunan (Handel-Mazetti, no. 438, inter urbes Linling and Sining, alt. 200–500 m. and no. 552, ad minas Hsikwang-schan prope urbem Hsinhwa, in fruticetis, alt. 600–800 m.) and the variety *pruinosa* Byhouwer in Anhwei (R. C. Ching, no. 3248).

*Berberis Kawakamii* Hayata in Jour. Coll. Sci. Tokyo XXX. Art. I. 24 (1911); Icon. Pl. Formos. I. 40, t. 9 (1911); l. c. III. 4 (1914).—Kane-hira, Formos. Trees 32, fig. (1917).—Schneider in Oesterr. Bot. Zeitschr. LXVII. 140 (1918).

The original material was found by T. Kawakami on Mt. Morrison, alt. 2700 m.; among E. H. Wilson's specimens three are from the same province (no. 9720, Arisan, prov. Kagi, alt. 2333–2933 m., no. 10910, Arisan to Mt. Morrison, prov. Kagi, alt. 2666–3666 m., and no. 10952,